

Client's ref.:
File: 0599-5894USFinal/JY/Nelson

WHAT IS CLAIMED IS:

1. A method of correcting an image with perspective distortion, comprising the steps of:

receiving image data including a distorted object image;

setting at least a distortion parameter pertaining to the image data according to an operational instruction;

calculating a plurality of coordinates of corners of the distorted object image according to the distortion parameter;

determining a transformation matrix according to the calculated coordinates of the corners of the distorted object image; and

transforming the distorted object image to a corrected object image according to the transformation matrix.

2. The method of claim 1, wherein the distortion parameter includes a distorted side of the distorted object image.

3. The method of claim 1, wherein the distortion parameter includes a distortion ratio of a distorted side of the distorted object image.

4. The method of claim 1, wherein the distortion parameter includes a location of a distortion central line of the distorted object image.

5. The method of claim 1, wherein the coordinates of the corners of the corrected object image are calculated

according to the location of the distortion central line of the distorted object image.

6. The method of claim 1, wherein the distortion parameter includes a distorted side of the distorted object image, a distortion ratio of the distorted side of the distorted object image and a location of a distortion central line of the distorted object image.

7. A method of producing an artificial image with perspective distortion, comprising the steps of:

receiving image data including an undistorted object image;

setting at least a parameter pertaining to the image data according to an operational instruction;

calculating a plurality of coordinates of corners of the undistorted object image according to the parameter;

determining a transformation matrix according to the calculated coordinates of the corners of the undistorted object image; and

transforming the undistorted object image to the artificial image with perspective distortion according to the transformation matrix.

8. A method of determining coordinates of corners of a distorted object image on an image with perspective distortion, comprising the steps of:

determining a distorted side of the distorted object image;

determining a location of a distortion central line of the distorted object image with respect to the distorted

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side and a distortion ratio of the distorted object image with respect to the distorted side; and

calculating the coordinates of the corners of the distorted object image according to the distorted side, the location of the distortion central line and the distortion ratio.

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